

REMARKS

This document is filed in reply to the Final Office Action dated February 23, 2005 ("Final Office Action").

Initially, Applicants would like to thank the Examiner for granting two telephone interviews on March 16 and May 16, 2005 ("the first interview" and "the second interview") to discuss rejections raised in the Final Office Action. During the first interview, Applicants' counsel discussed with the Examiner the rejections under 35 U.S.C. § 112, first and second paragraphs. During the second interview, Applicants' counsel discussed with the Examiner and the Supervisory Examiner the same rejections and the rejection under 35 U.S.C. § 102(e). The Examiners acknowledged that Applicants' arguments were persuasive and suggested that certain claims be amended.

At the Examiners' suggestion, Applicants have amended claims 1, 2, 5, 7, and 29 to promote clarity and correct informalities. Examples of the support for some of the amendments are listed in Table 1 below. No new matter has been introduced.

Table 1. Support for Recitations in Amended Claims 1, 2, and 29

Recitation in amended claims	Support in the original specification or claims
Claim 1:	
"candidate body"	page 5, lines 16-26; original claim 1
"cell"	original claims 4 and 5
"microorganism"	page 18, line 28
"virus"	page 5, line 22; original claim 13
"prion"	page 5, line 23; original claim 13
"molecule"	page 22, lines 13-18
Claim 2:	
"a cell mixture"	original claim 3
Claim 29:	
"cell dye"	page 16, line 17

Claims 1-29 are pending. Claims 8-16 and 20-28 have been withdrawn from further consideration for being drawn to a non-elected invention. Claims 1-7, 17-19, and 29 are under examination. Reconsideration of this application is requested in view of the following remarks.

Objections

The Examiner objected to claims 2 and 7 for containing informalities. See the Final Office Action, page 6, lines 12-17. Applicants have rectified the informalities.

Rejection under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 1-7, 17-19, and 29 on various grounds, which are traversed respectively below.

I

The Examiner rejected the claims for containing new matter under 35 U.S.C. § 112, first paragraph. In the non-final office action dated July 26, 2004, the Examiner rejected claim 1 for indefiniteness, on the ground that the phrases “a low magnification” and “a high magnification” were “vague and indefinite.” In a subsequent response, Applicants replaced the two phrases with “a first magnification” and “a second, higher magnification,” respectively. The Examiner countered that the two amendments constituted new matter. See the Final Office Action, page 3, lines 5-6.

During the above-mentioned first interview, Applicants’ counsel proposed withdrawing the two amendments. The Examiner agreed that this would render moot the “new matter” rejection. He further agreed to withdraw the previously raised indefiniteness rejection if Applicants could submit a reference to support that one skilled in the art would understand the meanings of “a low magnification” and “a high magnification” as they relate to imaging of biological samples.

During the second interview, Applicants’ counsel pointed out to the Examiner and the Supervisory Examiner two passages in U.S. Patent 6,215,892 (“the ’892 patent”), a prior art reference cited by the Examiner that describes a method and apparatus for automated cell analysis or biological specimens. More specifically, the ’892 patent teaches that (1) “a low magnification [is] typically 10x;” and (2) “a high magnification [refers to] ... 40x or 60x” at column 2, line 19 and lines 25-26, respectively. The Examiner and the Supervisory Examiner acknowledged that these two passages teach what “a low magnification” and “a high magnification” mean to one skilled in the field of biological imaging. They further requested

that claim 1 be amended so that it relates to biological imaging. Applicants have amended claim 1 accordingly and submit that the Examiner's ground for rejection has been removed.

II

The Examiner rejected claims 1-7, 17-19, and 29 under 35 U.S.C. § 112, second paragraph on three grounds.

First, according to the Examiner, the phrases "a first magnification" and "a second, higher magnification" recited in independent claim 1 are "vague and indefinite." See the Final Office Action, page 4, lines 1-3. For the remarks set forth immediately above, Applicants request that the rejection be withdrawn.

Second, it is the Examiner's position that the phrase "a dye sensitive for cells" recited in claim 29 "is vague and indefinite." See the Final Office Action, page 4, lines 9-13. Applicants have replaced the phrase with "a cell dye" and would like to point out that the Specification clearly teaches cell dyes. See, e.g., page 16, lines 17-19. Applicants submit that claim 29, as amended, is definite.

Finally, the Examiner rejected claim 5 on the ground that "the system" recited in this claim lacks antecedent basis. See the Final Office Action, page 4, lines 15-18. Applicants have rectified this deficiency by amending claim 5 to refer to a method rather than a system.

Rejection under 35 U.S.C. § 102(e)

The Examiner rejected claims 1, 4, and 17-19 as being anticipated by the above-mentioned '892 patent. See the Final Office Action, page 5, lines 11-12. Applicants disagree and will first discuss independent claim 1.

Claim 1 covers a method of detecting a target body in a specimen field. The method includes acquiring and recording a first image at a low magnification and a second image at a high magnification of a location in a specimen field that has been exposed to a first fluorophore and a second fluorophore. The first fluorophore and the second fluorophore, upon excitation, respectively emit photons at a first wavelength and a second wavelength. The first image is generated via an optical or electronic filter that substantially blocks photons of the second wavelength but is permissive for photons of the first wavelength. Conversely, the second image,

which is at high magnification, is generated via an optical or electronic filter that substantially blocks photons of the first wavelength but is permissive for photons of the second wavelength.

It is the Examiner's position that the '892 patent describes every aspect of the method of claim 1, including the aforementioned differential image-generating and acquiring process. Admittedly, as the Examiner correctly pointed out, the '892 patent teaches using low pass filtering to process images. As noted by the Supervisory Examiner in the second interview, low pass filtering is a standard technique that passes all frequencies below a designated cut-off frequency and excludes those above the cut-off frequency. By passing lower frequencies and excluding higher frequencies, "low pass filtering is [used to] essentially blur or smear the entire color converted image ... [and] smear artifacts more than larger objects of interest." See, the '892 patent, column 16, lines 35-38. However, as also discussed in the second interview, the '892 patent does not teach differentially generating two images via two filters at two magnifications, let alone acquiring and recording such images as required in claim 1. Thus, the '892 patent does not anticipate claim 1.

During the second interview, Applicants' counsel pointed out the differences between the method taught in the '892 patent and the method of claim 1. The Examiner and the Supervisory Examiner acknowledged that the counsel's arguments were pervasive and indicated that the rejection would be withdrawn.

For the reasons set forth above, independent claim 1 is novel over the '892 patent. So are claims 4 and 17-19, all of which depend from claim 1.

CONCLUSION

Applicants submit that grounds for the rejections asserted by the Examiner have been overcome, and that claims, as pending, define subject matter that is free of new matter, definite, and novel. On this basis, it is submitted that allowance of this application is proper, and early favorable action is solicited.

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Please apply any other charges to deposit account 06-1050, referencing attorney docket
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Respectfully submitted,

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